

D-4/40

SERVICE MANUAL

US Model
Canadian Model
D-4

AEP Model
UK Model
E Model
Australian Model
D-40



Discman

SPECIFICATIONS

CD section

System
Laser diode properties

Compact disc digital audio system
Material: GaAlAs
Wavelength: 780 nm
Emission duration: Continuous
Laser output: Less than 44.6 μ W
(This output is the value measured at a distance of 200 mm from the objective lens surface on the Optical Pick-up Block.)
20-20,000 Hz: \pm dB
Line output (stereo minijack)
Output level 1 V rms at 47 kilohms
Load impedance over 10 kilohms
Headphones (stereo minijack)
9 mW + 9 mW at 32 ohms

Frequency response
Output (at 9 V input level)

General

Power requirements

Supplied:
• Rechargeable battery pack BP-3
• DC IN 9 V jack accepts the Sony AC power adaptor for use on 120 V AC, 60 Hz (US, Canadian) for use on 220 V/240 V AC, 50 Hz (AEP, UK, E, Australian)

Optional:
• Sony EBP-3 battery case using four size AA (LR6) batteries, 6 V (supplied: UK)
• DC IN 9 V accepts: Sony CPM-100P mount plate for use on 12 V car battery 1.2 W DC

Power consumption
Dimension

Approx. 136 \times 36.8 \times 147 mm ($5\frac{3}{8} \times 1\frac{1}{2} \times 5\frac{7}{8}$ in.) (w/h/d) not incl. inclined part (depth), projecting parts and controls
Approx. 137.5 \times 38.8 \times 149 mm ($5\frac{1}{2} \times 1\frac{5}{8} \times 5\frac{7}{8}$ in.) (w/h/d) incl. projecting parts and controls

Weight

Approx. 480 g (1 lb 1 oz) net
Approx. 655 g (1 lb 7 oz) incl. rechargeable battery pack

Supplied accessories

AC power adaptor (1)
Rechargeable battery pack (1)
Connecting cord (1)
Carrying case (1)
Carrying belt (hand belt: French) (1)
Headphone (1) (UK)
AC plug adaptor (1) (E)

Supplied battery pack

Output voltage
Capacity
Dimensions
Weight

6 V
1000 m A/h
Approx. 31.3 \times 17.3 \times 118.6 mm ($1\frac{1}{4} \times 1\frac{1}{8} \times 4\frac{3}{4}$ in.) (w/h/d)
Approx. 180 g ($6\frac{3}{4}$ oz)

Charging time/Battery life

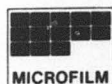
Charging time	Continuous disc playing time
8 hours (fully charged)	approx. 4 hours
5 hours (90% charged)	approx. 3.5 hours

Notes on charging

- For charging, use only the supplied AC power adaptor. If not, the player will be damaged.
- The CD player can also be operated during charging. In this case, approx. 24 hours are necessary for a full charge. However, when the CD player does not operate normally, stop it and charge the unit for a while.

CAUTION

Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.



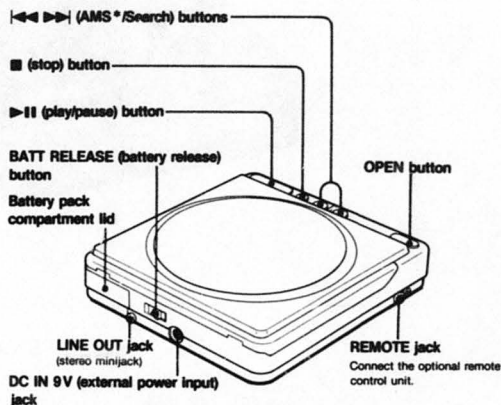
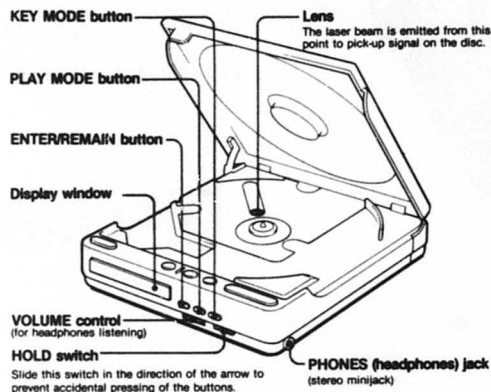
COMPACT DISC
COMPACT PLAYER
SONY®

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SECTION 1 GENERAL

LOCATION AND FUNCTION OF CONTROLS



*AMS is an abbreviation of Automatic Music Sensor.

SECTION 2 SERVICING NOTES

NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK OR BASE UNIT

The laser diode in the optical pick-up block may suffer electrostatic breakdown because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body.

During repair, pay attention to electrostatic breakdown and also use the procedure in the printed matter which is included in the repair parts.

The flexible board is easily damaged and should be handled with care.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK Δ OR DOTTED LINE WITH MARK Δ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE Δ SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

Before Replacing the Optical Block

Please be sure to check thoroughly the parameters as per the "Optical Block Checking Procedures" (Part No.: 9-960-027-11) issued separately before replacing the optical block. Note and specifications required to check are given below.

- FOK output : IC501 ⑨ pin
When checking FOK, remove the lead wire to disc motor and unsolder and open IC801 ② pin (FOK).
- S curve P-to-P value : 3Vp-p
When checking S curve P-to-P value, remove the lead wire to disc motor.
- Adjusted part for focus gain adjustment : RV501
- RF signal P-to-P value : 0.7 - 1.25Vp-p
- Traverse signal P-to-P value : 1.5Vp-p
- The repairing grating holder is impossible.
- Adjusted part for tracking gain adjustment : RV502

Flexible Circuit Board Repairing

- Keep the temperature of the soldering iron around 270°C during repairing.
- Do not touch the soldering iron on the same conductor of the circuit board (within 3 times).
- Be careful not to apply force on the conductor when soldering or unsoldering.

Notes on chip component replacement

- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

NOTES ON LASER DIODE EMISSION CHECK

The laser beam on this model is concentrated so as to be focused on the disc reflective surface by the objective lens in the optical pick-up block. Therefore, when checking the laser diode emission, observe more than 25cm away from the objective lens.

Laser Diode Check Procedure

The laser diode on this set will not emit unless the top panel is closed and S801 (leaf SW type) is turned on. The laser diode will always emit even if focus search is not performed in service mode.

The laser diode is checked using the current value which flows to the laser diode inside the optical pick-up block.

Procedure 1 (service mode or normal operation)

Check the laser diode emission with the eye.

1. Open upper panel.
2. S801 on as Fig. 1.
(In service mode, this operation is not necessary.)
3. Press the ► key.
(In service mode, this operation is not necessary.)
4. Observe the objective lens and confirm that the laser diode is emitting light. At this time, the laser diode goes on about 10 seconds due to focus search. If it does not, APC circuit or optical pick-up block is defective.

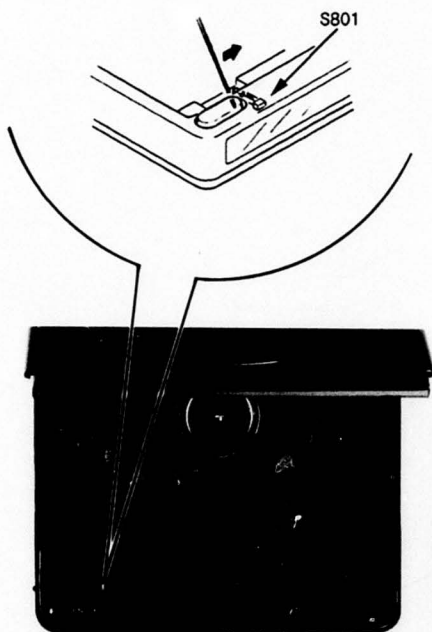
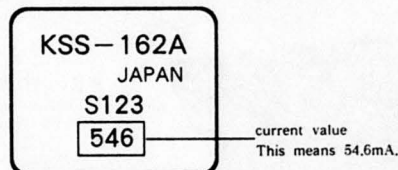


Fig.1 Turning S801 on

Procedure 2 (service mode or normal operation)

Check by the current with flows in the laser diode.

1. Close the top panel.
2. Remove the main board and read the current value on the label affixed to the UPF.
(Label on optical pick-up block)



The current value varies with the set.

3. Connect a VOM as shown in Fig. 2.
4. Press the ► key.
5. Calculate the current by the VOM reading.
VOM reading (V) $\div 10$ = current (A)
ex. VOM reading = 0.56V
 $0.56 \div 10 = 0.056$ (A) = 56 (mA)
6. Confirm that the ammeter reading is within the range given below.
value on label: 54.6mA (25°C)
variation relative to temperature: 0.4mA/°C
(Current increases when temperature rises and decreases when it drops.)

If the value is more than the range give, APC circuit has been defective or the laser diode has deteriorated. If it is less, APC circuit or optical pick-up block is defective.

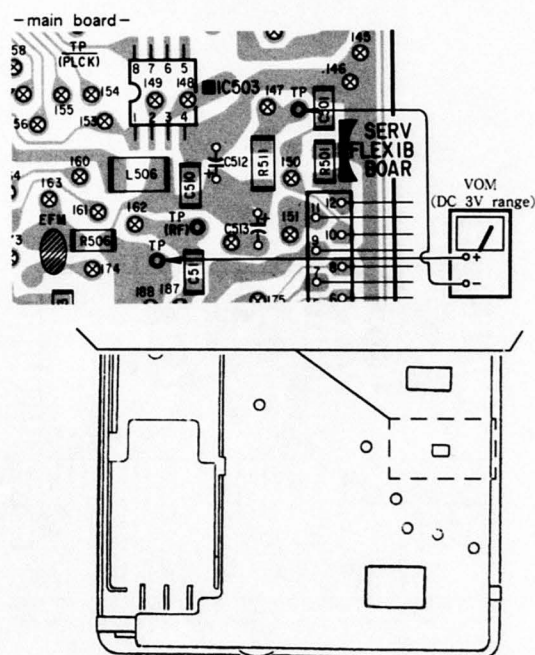


Fig.2 VOM Connection

SERVICE MODE (service program)

This set has built-in service program in the microcomputer as usual sets.
The operation method of service program is explained below.

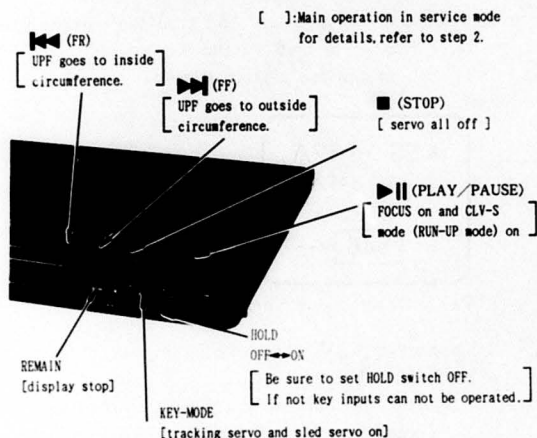


Fig.3 Key Positions

• Step 1 (Service Mode setting method)

1. Turn the HOLD switch OFF with the external power supply not plugged in (no power applied to set) and press the **(PLAY/PAUSE)** key.
2. Solder jumper TEST terminal.
(IC801 pin 24 (TEST) is grounded.)
3. Plug in external power supply.
This puts the set into service mode.

• Step 2 (Service Mode operation)

1. When service mode is set, the display will change 6 times, and those 6 changes will be repeated over and over.
With this the LCD display should be present in service mode. Even if LCD does not display, other operations will be performed.
2. When **(FR)** or **(FF)** key is pressed, the UPF moves to the inside or outside circumference. Tracking servo and sled servo go off when this is done, so press KEY-MODE to turn on the tracking servo if necessary.
3. When REMAIN is pressed, the display stops. When REMAIN is released, the display continues to change. This allows check of each segment.
4. When **(PLAY/PAUSE)** Key is pressed, CLV-S (pull-in mode) starts while performing focus search. When there is no disc installed, focus search is repeated several times while disc motor is rotating.
5. When KEY-MODE is pressed, tracking servo, sled servo and CLV-A (servo during PLAY) go ON.
6. When 4 and 5 are performed, the disc begins to play. At this time, the top panel should be closed and S801 are to be ON. A sound is not produced as muting is ON.
7. All servo (focus, tracking, sled and spindle) go off when **(STOP)** key is pressed.

• Step 3 (Service Mode release)

1. First be sure to unplug the external power supply, then remove the solder jumper TEST terminal.
2. The set will now operate normally.

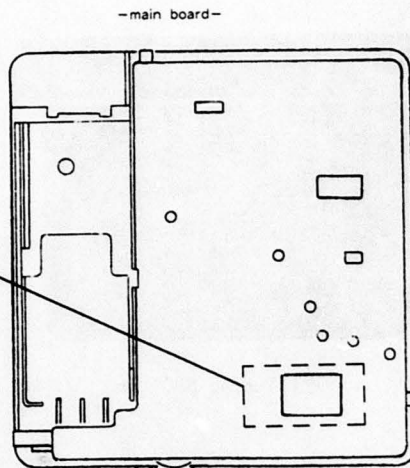
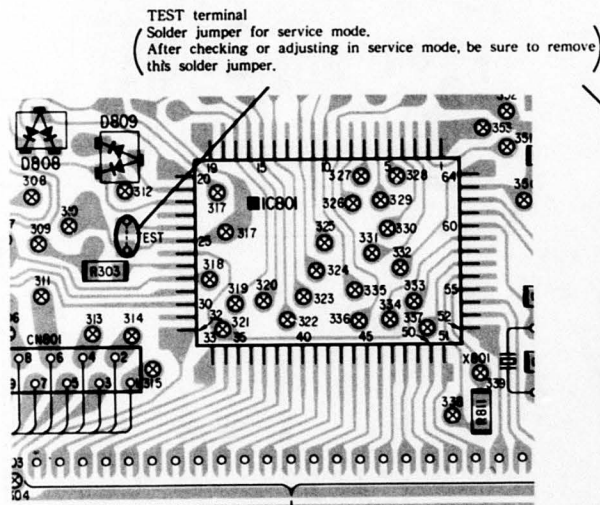


Fig.4 TEST terminal position

SECTION 3 ELECTRICAL ADJUSTMENTS

Notes on Adjustment

1. Perform adjustments except for RECHARGEABLE VOLTAGE ADJUSTMENT in service mode.
Be sure to release service mode after completing adjustment.
(Refer to "Service Mode (service program)" on page 4.)
2. Perform adjustments in the order given.
3. Use YEDS-18 disc (part No.: 3-702-101-01) unless otherwise indicated.
4. Power supply voltage: DC 9V
HOLD switch: OFF

PREPARATION

Put the set into service mode (See page 4.) and perform the following checks. Repair if there are any abnormalities.

• Sled Motor Check

1. Press the OPEN button and open the top panel.
2. Press the **▶▶**, **◀◀** keys and make sure that the opticl pick-up block moves smoothly, without catching, from the inmost → outmost → inmost circumference.
▶▶: opticl pick-up block moves outward
◀◀: opticl pick-up block moves inward

• Focus Search Check

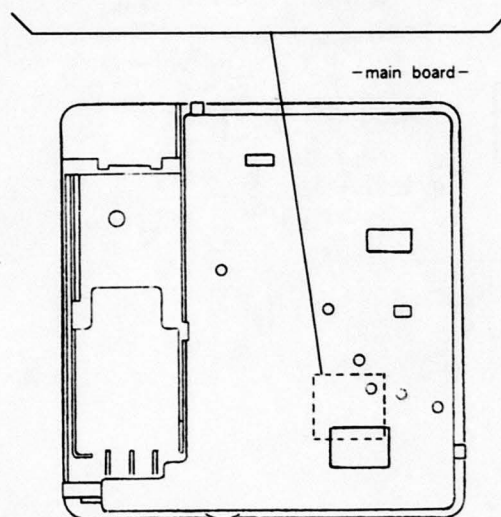
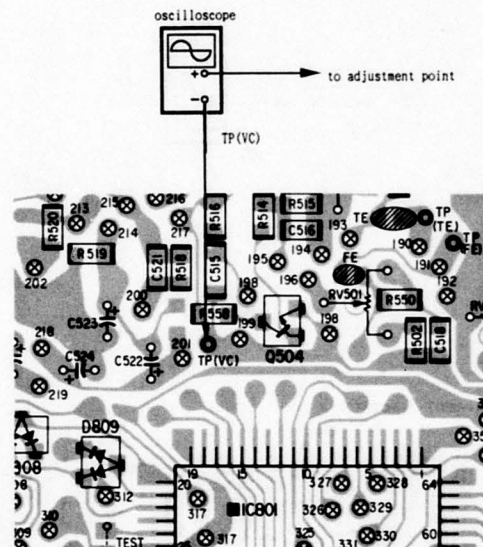
1. Press the OPEN button and open the top panel.
2. Press the **▶||** key. (Focus search is performed continuously.)
3. Observe the opticl pick-up block objective lens and check that it moves smoothly up and down with no catching or noises.
4. Press the **■** key.
Check that focus search operation stops. If it does not, press the **■** key again.

VC (1/2 Vcc) Connecting Point

FOCUS BIAS ADJUSTMENT

TRACKING BALANCE ADJUSTMENT

When the adjustments above are performed, connect the ⊖ side of oscilloscope to the point below.

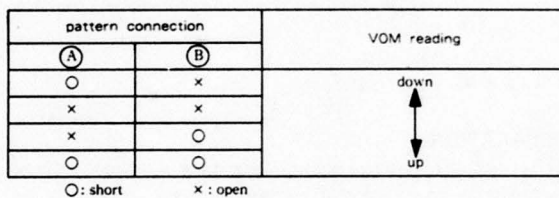


VC connecting point

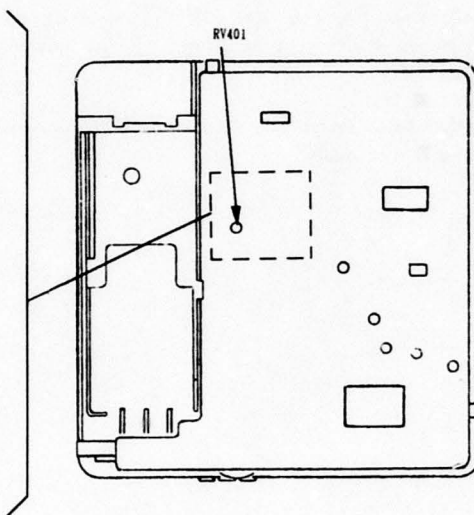
3.5V Adjustment

Adjustment Procedure :

1. Put the set into service mode (see page 4).
2. Connect the VOM to main board test point TP (+3.5V).
3. Adjust the pattern connection (Ⓐ or Ⓑ) to obtain 3.45V to 3.6V reading on the VOM.

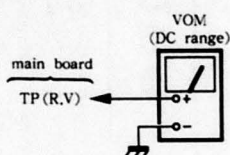


4. After adjustment, release service mode (see page 4).



Rechargeable Voltage Adjustment

Adjustment Procedure :



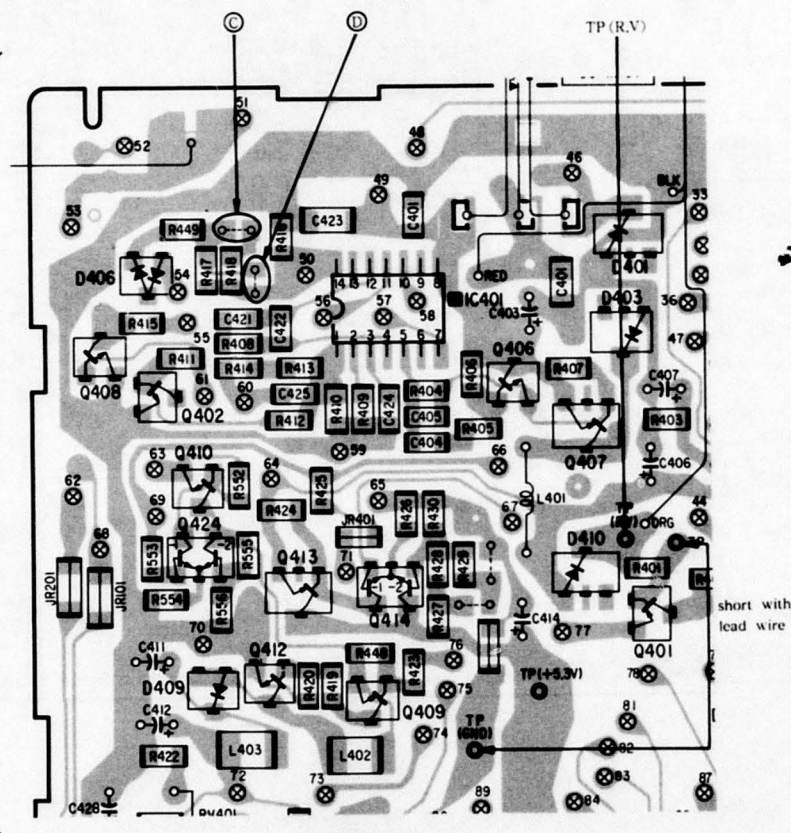
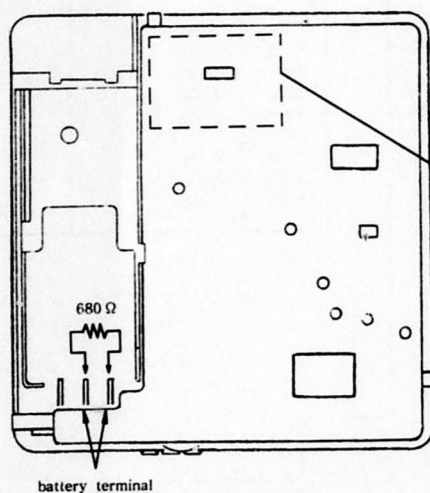
1. Connect the VOM to main board test point TP(R.V).
2. Short between the Q401 base and GND. Connect a 680 Ω resistor between pin ② and pin ③ of battery terminal as shown below.
3. Apply DC 9V with required dc power supply from external power jack CNJ401.
4. Adjust the pattern connection (C or D) to obtain 7.25 to 7.47V reading on the VOM.

pattern connection		VOM reading
Ⓒ	Ⓓ	
○	○ or ×	down ↑ up
×	○	
×	×	

○ : short × : open

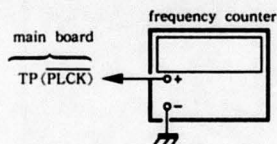
Note : Measure after the VOM reading becomes stable.

Adjustment Location : main board



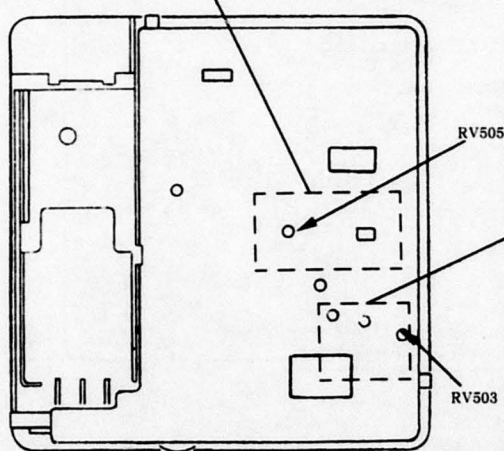
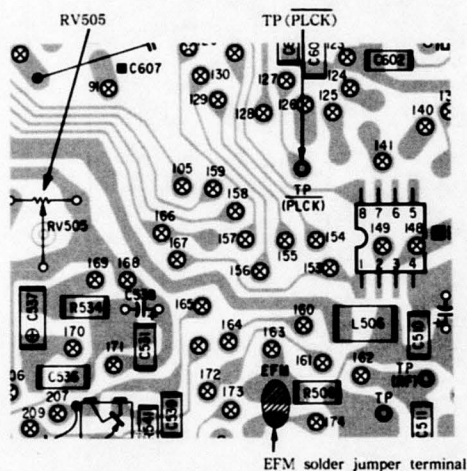
PLL Free Run Frequency Check and Adjustment

Check/Adjustment Procedure :



1. Disconnect EFM solder jumper terminal in the diagram below.
2. Connect a frequency counter to main board test point TP(PLCK).
3. Put the set into service mode (See page 4).
4. Check that the frequency counter reading is 4.31 ± 0.01 MHz. If not, adjust RV505 so that it is 4.31 ± 0.01 MHz.
5. After adjustment, release service mode (see page 4).
6. Short the jumper terminal disconnected in step 1.

Check/Adjustment Location : main board

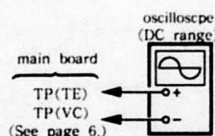


Tracking Balance Adjustment

Conditions :

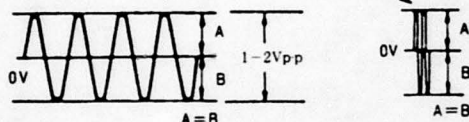
The set should be placed either horizontally.

Adjustment Procedure :



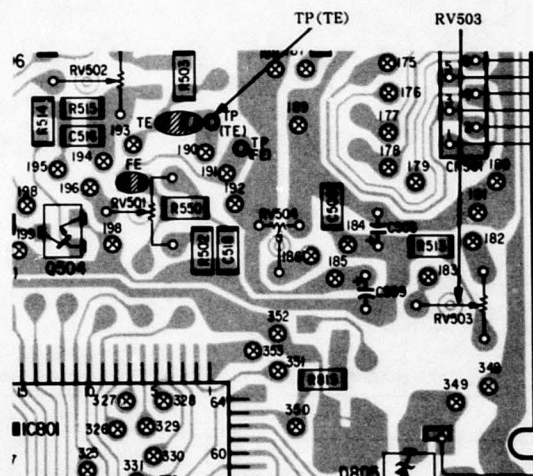
1. Connect the oscilloscope to main board TP(TE).
2. Put the set into service mode (See page 6).
3. Press the $\blacktriangle\blacktriangle$ and $\blacktriangle\blacktriangle$ keys to move the optical pick-up block to the center.
4. Insert the disc (YEDS-18) and close the top panel.
5. Press the $\blacktriangle\blacktriangle$ key.
(It will go from focus search to focus on, and CLV pull-in mode state. Tracking and sled are OFF.)
6. Adjust RV503 so that the oscilloscope waveform is symmetrical on the top and bottom in relation to 0V.

Note : Take sweep time as long as possible to obtain best waveform.



7. Unplug the external power supply to stop spindle motor from rotating.
8. After adjustment, release service mode (see page 4).

Adjustment Location : main board

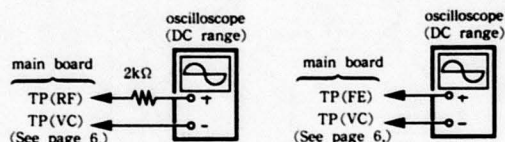


Focus Bias Adjustment

Conditions :

The set should be placed either horizontally.

Adjustment Procedure :

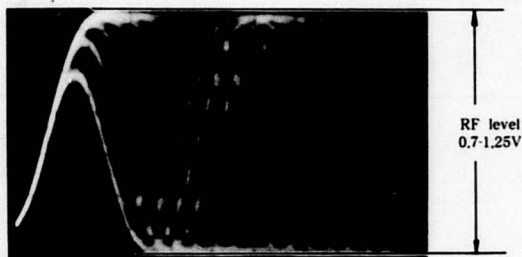


- Put the set into service mode (See page 4).
- Connect the oscilloscope to main board test point TP(RF).
- Press the **▶▶** and **◀◀** key to move the optical pick-up block to the center. (Move the optical pick-up block to the music area on the disc to enable easy visibility of the eye pattern).
- Insert the disc (YEDS-18) and close the top panel.
- Press the **▶▶** key.
(It will go from focus search to focus on, and CLV pull-in mode state. Tracking and sled are OFF.)
- Press the KEY-MODE button. (Tracking and sled go ON.)
- Adjust RV504 so that the oscilloscope waveform eye pattern is good. A good eye pattern means that the diamond shape (◇) in the center of the waveform can be clearly distinguished.

• RF Signal Reference Waveform (eye pattern)

VOLT/DIV : 200mV

TIME/DIV : 500ns



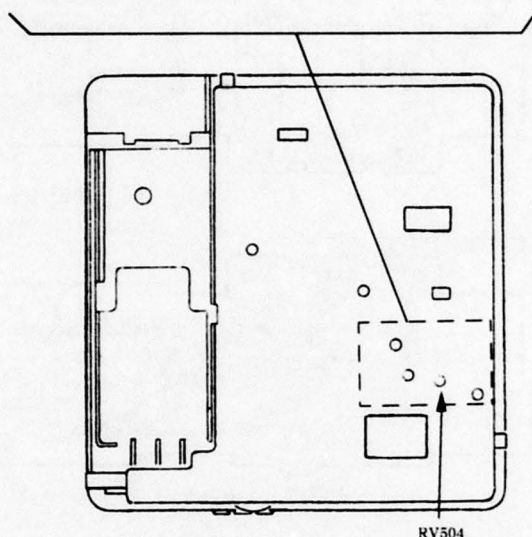
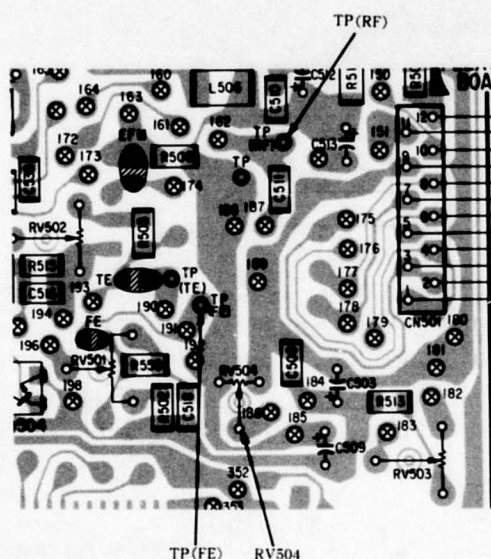
When observing the eye pattern, set the oscilloscope for AC range and raise vertical sensitivity.

- Unplug the external power supply to stop spindle motor from rotating.
- Remove the disc and connect the oscilloscope to main board TP(FE).
- Adjust RV503 again referring to the table followed.

voltage of TP(FE)	adjustment
more than +100mV	Not adjust again.
-50 to 100mV	Adjust RV503 again for +100mV reading on oscilloscope.
less than -50mV	Not adjust again.

- After adjustment, release service mode (see page 6).

Adjustment Location : main board



Reference

Focus/Tracking Gain Adjustment

A frequency response analyzer or CD jig is necessary in order to perform this adjustment exactly.

However, this gain has a margin, so even if it is slightly off, there is no problem. Therefore, do not perform this adjustment.

Focus/tracking gain determines the pick-up followup (vertical and horizontal) relative to mechanical noise and mechanical shock when the 2-axis device operate. However, as these reciprocate, the adjustment is at the point where both are satisfied.

- When gain is high, the noise when the 2-axis device operates increases.
- When gain is low, it is more susceptible to mechanical shock and skipping occurs more easily.

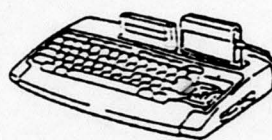
This adjustment is to be performed when replacing the following parts :

- UPF (optical pick-up block)
- RV501 (focus gain volume)
- RV502 (tracking gain volume)

On this set, it is very difficult to simplify this adjustment. For those sets on which symptoms such as "occasional skipping" are hard to discover, or it is hard to tell if the set has been repaired, use the CD jig and perform this adjustment. Refer to the diagram below for connection of the CD jig. The adjustment procedure is described in the separate CD jig Instruction Manual.

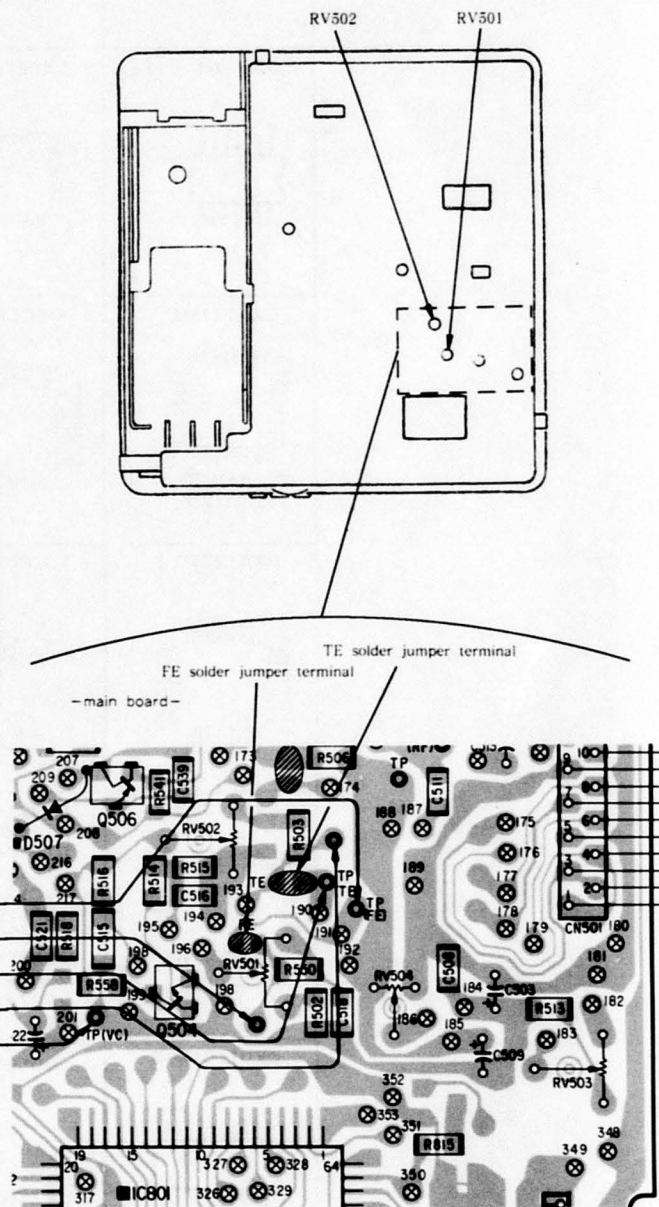
Please be careful not to move RV501 (focus gain volume), RV502 (tracking gain volume) ordinarily.

CD jig connection :



CD jig

BRN
RED
ORG
YEL
WHT



SECTION 4 DIAGRAMS

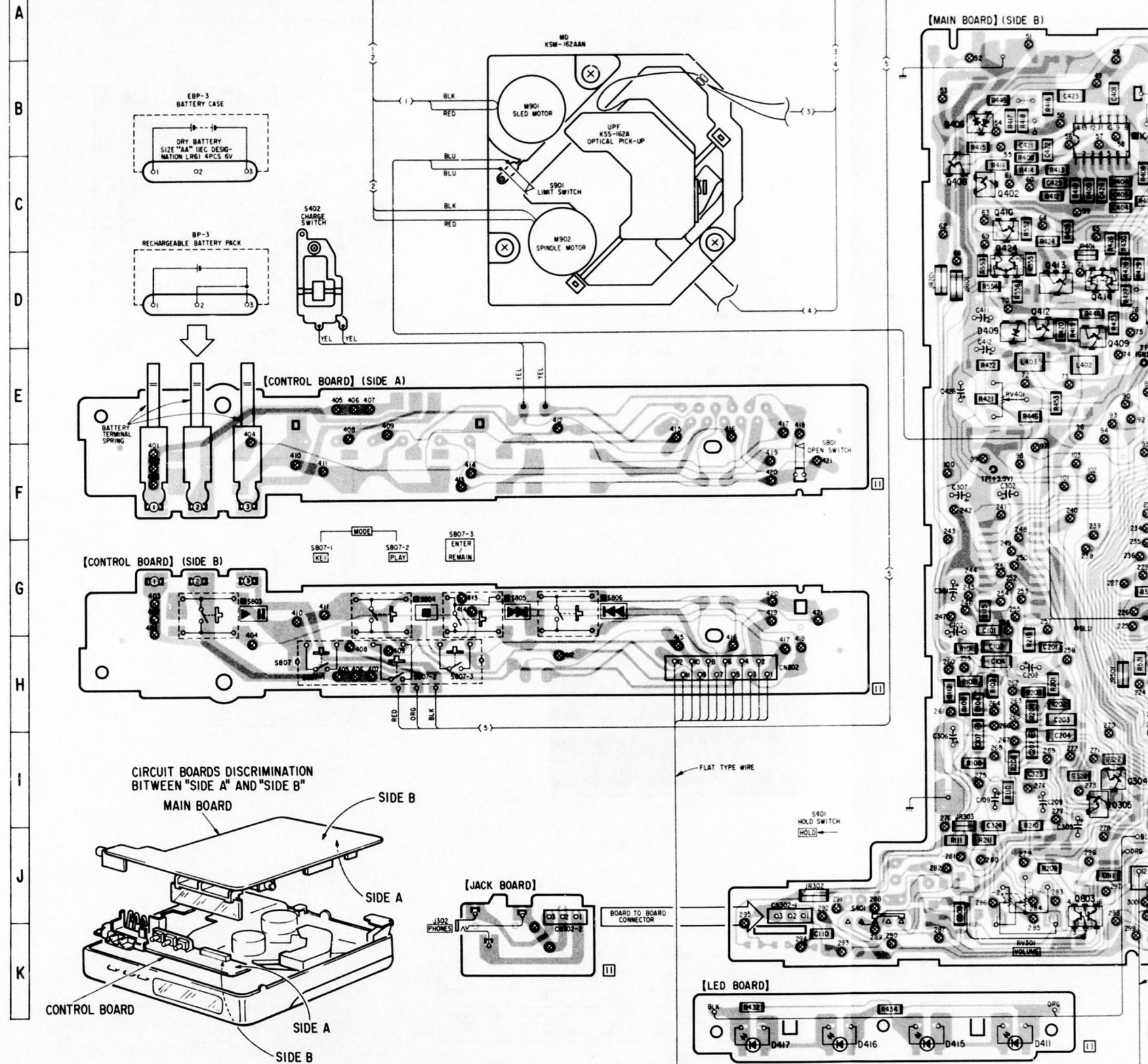
4-1. Semiconductor Lead Layouts.

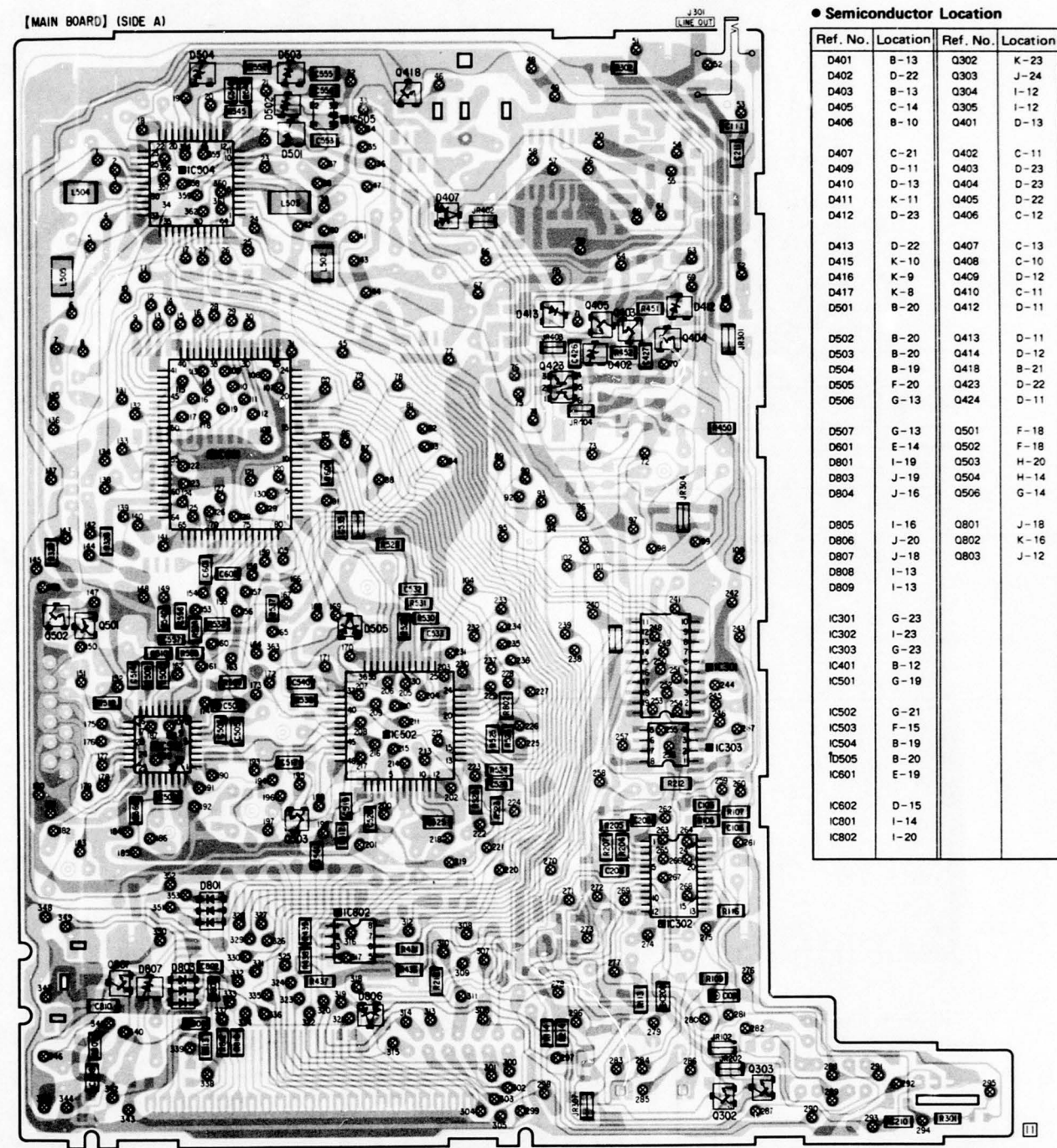
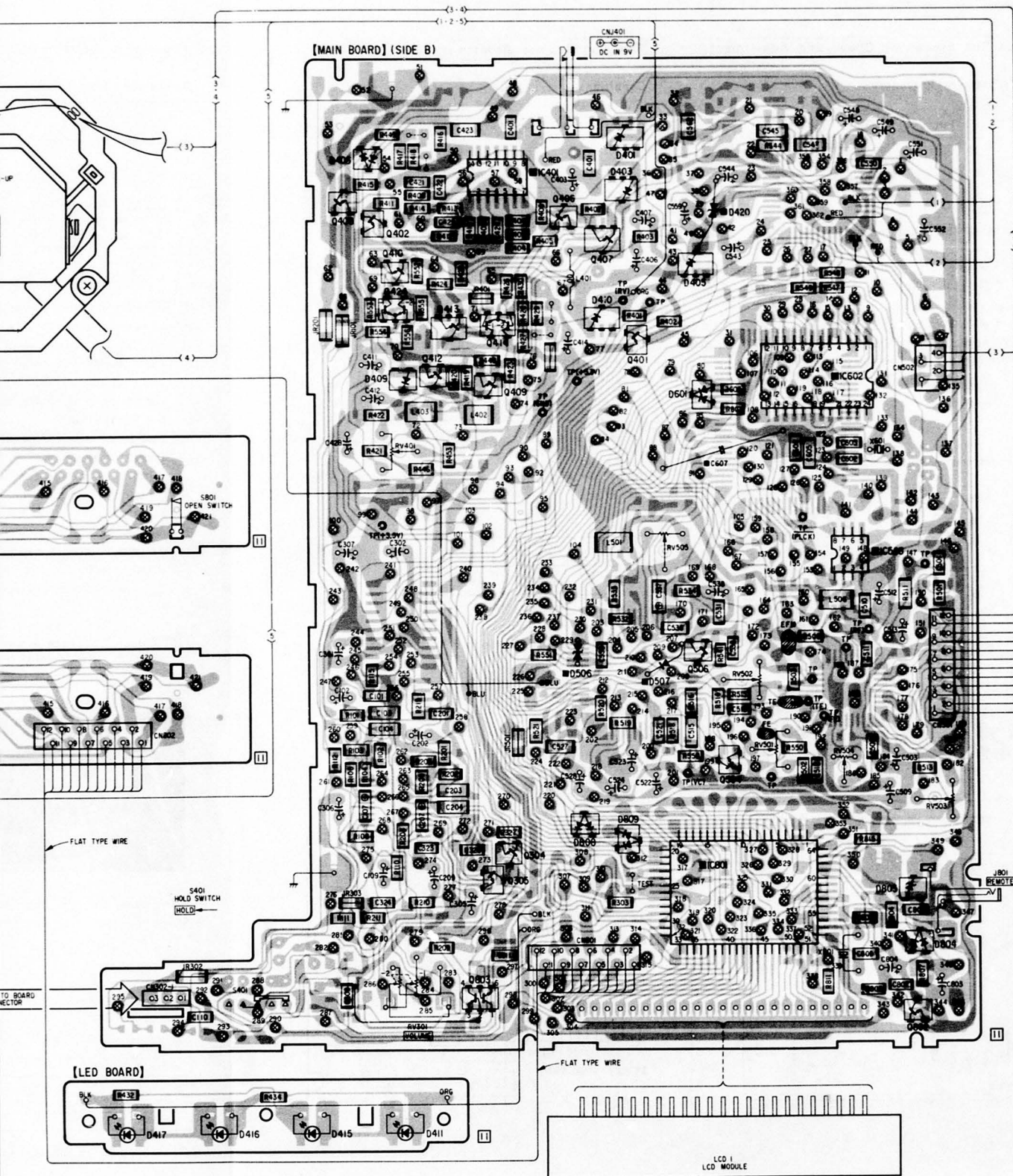
BA10358F NJM2903M NJM4560M (TOP VIEW)	CXK5816M-10L M51568FP (Top view)	FMW1 (TOP VIEW)	RD10M-B2 RD12M-B2 RD7.5M-B1 SB01-05CP (TOP VIEW)
BA9700F (TOP VIEW)	CXP5086-026Q TOP VIEW	1MD3 (TOP VIEW)	SB05-05CP (TOP VIEW)
CXA1271Q (Marking side view)	MPC1715 (TOP VIEW)	2SB1120 (TOP VIEW)	SLP478C (TOP VIEW)
CXA1272Q-Z (TOP VIEW)	TC7S04F (TOP VIEW)	1S5123 (TOP VIEW)	1S2835 (TOP VIEW)
CXD1130Q MARKING SIDE VIEW	DTA114YK DTA124EK DTA144TK DTC114TK DTC124EK 2SA1162Y 2SB624-BV5 2SB815 2SC2412K 2SC2712 2SC2812L7 2SD1048 2SD596 (TOP VIEW)	E10QS04 (TOP VIEW)	1S2837 (TOP VIEW)
CXD1161M-3 (TOP VIEW)	 (TOP VIEW)	1MN10 (TOP VIEW)	 (TOP VIEW)

Note on Mounting Diagram:

- : parts extracted from the rear side.
- : parts extracted from the side which is seen.
- : parts mounted on the conductor side.
- ⊗ : Through hole.
- ▨ : Pattern on the side which is seen.
- ▩ : Pattern of the rear side.

4-2. PRINTED WIRING BOARDS





● Semiconductor Location

Ref. No.	Location	Ref. No.	Location
D401	B-13	Q302	K-23
D402	D-22	Q303	J-24
D403	B-13	Q304	I-12
D405	C-14	Q305	I-12
D406	B-10	Q401	D-13
D407	C-21	Q402	C-11
D409	D-11	Q403	D-23
D410	D-13	Q404	D-23
D411	K-11	Q405	D-22
D412	D-23	Q406	C-12
D413	D-22	Q407	C-13
D415	K-10	Q408	C-10
D416	K-9	Q409	D-12
D417	K-8	Q410	C-11
D501	B-20	Q412	D-11
D502	B-20	Q413	D-11
D503	B-20	Q414	D-12
D504	B-19	Q418	B-21
D505	F-20	Q423	D-22
D506	G-13	Q424	D-11
D507	G-13	Q501	F-18
D601	E-14	Q502	F-18
D801	I-19	Q503	H-20
D803	J-19	Q504	H-14
D804	J-16	Q506	G-14
D805	I-16	Q801	J-18
D806	J-20	Q802	K-16
D807	J-18	Q803	J-12
D808	I-13		
D809	I-13		
IC301	G-23		
IC302	I-23		
IC303	G-23		
IC401	B-12		
IC501	G-19		
IC502	G-21		
IC503	F-15		
IC504	B-19		
IC505	B-20		
IC601	E-19		
IC602	D-15		
IC801	I-14		
IC802	I-20		

Diagram of the 74181 ALU showing two states: Segment 0 and Segment 1. The ALU has 18 pins (0-18) and a BATTERY input. The display shows '00' on the left and '0000' on the right. The right display is divided into four digits, each with a label: TV, FM, AM, CH, SEARCH, AUTO, KHz, AMS, MANUAL. The left display has labels: BATT, PRESET, ALL, A, B, SHUFFLE, RMS, MEM, REMAIN, STEREO. The diagram shows the internal logic connections for each segment.

SECTION 5 EXPLODED VIEWS

NOTE:



- The mechanical parts with no reference number in the exploded views are not supplied.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.


- Due to standardization, parts with part number suffix -XX and -X may be different from the parts specified in the components used on the set.

- Color Indication of Appearance Parts Example:
(RED) ... KNOB, BALANCE (WHITE)

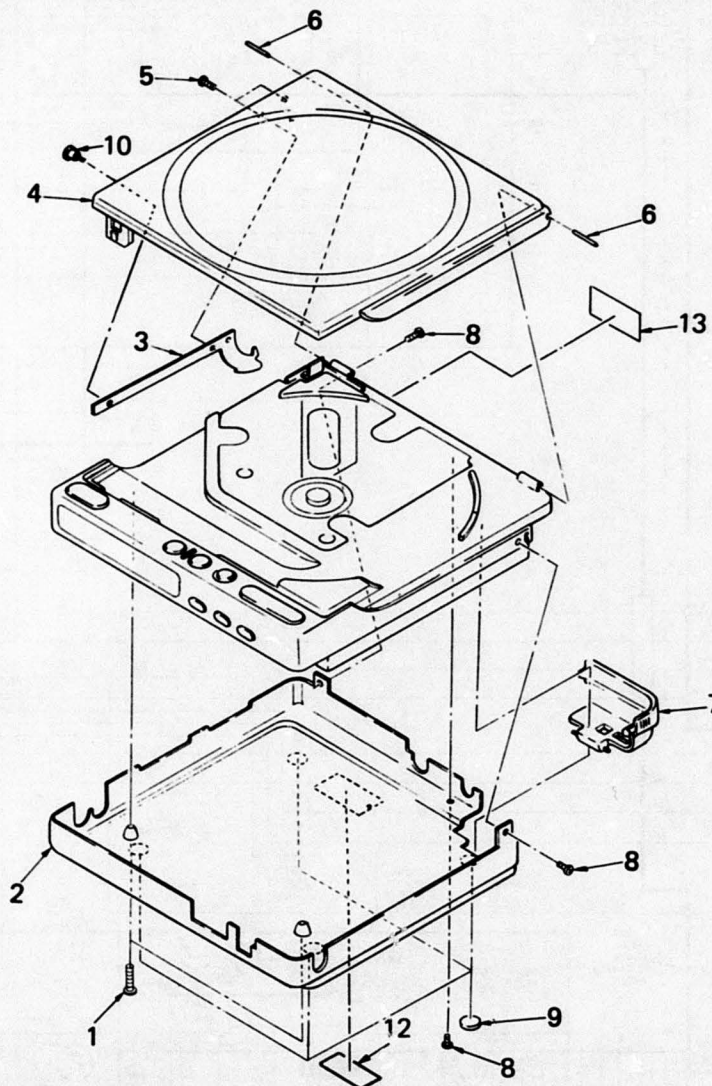
↑
Cabinet's Color

↑
Parts' Color

The components identified by mark  or dotted line with mark  are critical for safety. Replace only with part number specified.

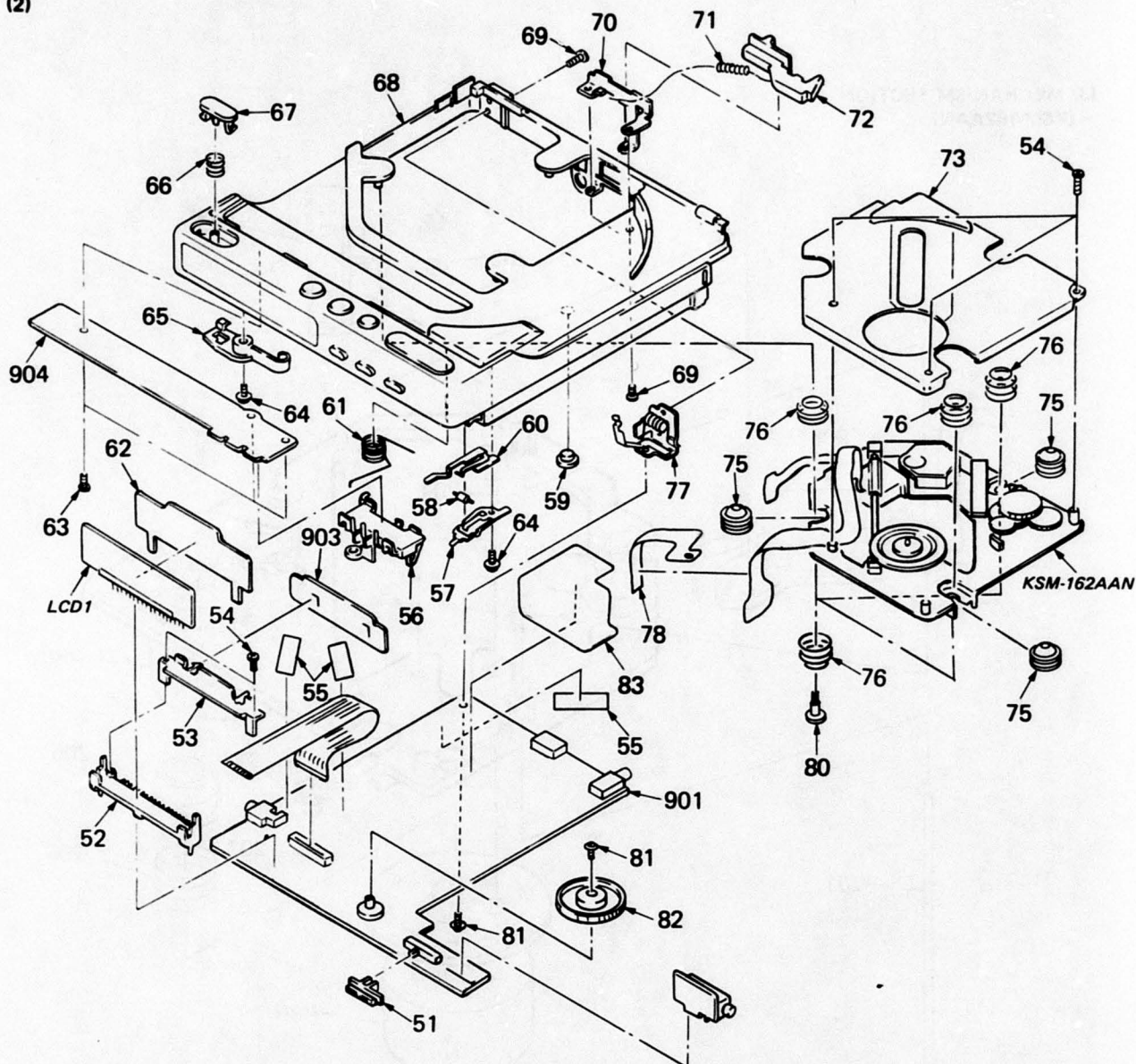
Les composants identifiés par une marque  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

(1)



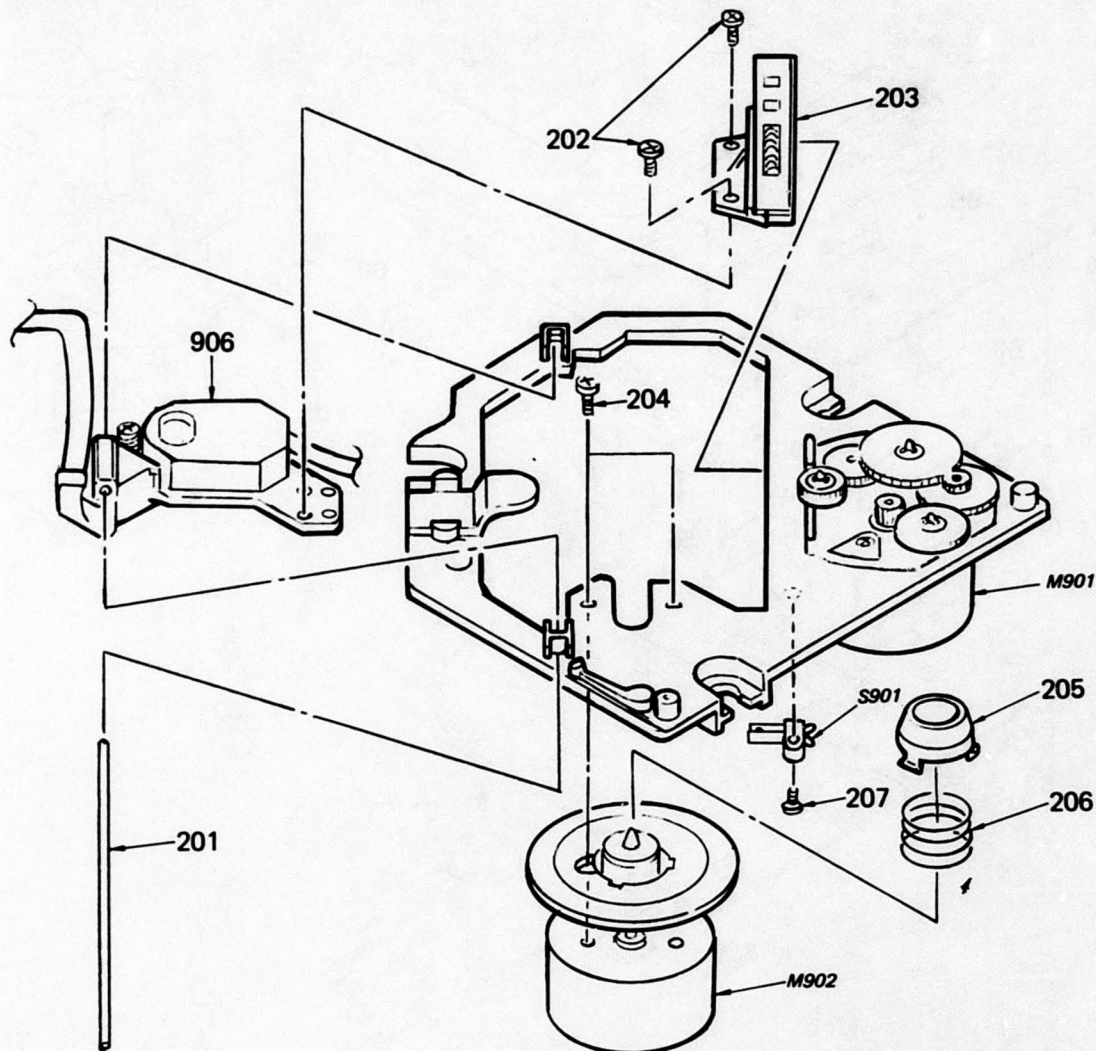
No.	Part No.	Description	Remarks	No.	Part No.	Description	Remarks
1	4-908-792-61 4-908-792-71	(WHITE)...SCREW (B2X6), TAPPING, P1 (BLACK)...SCREW (B2X6), TAPPING, P1		6	4-924-714-01	SHAFT (FULCRUM)	
2	X-4924-704-1 X-4924-709-1	(BLACK)...PLATE ASSY, BOTTOM (WHITE)...PLATE ASSY, BOTTOM		7	4-924-734-01 4-924-734-11	(BLACK)...LID, BATTERY CASE (WHITE)...LID, BATTERY CASE	
3	4-924-713-01	ARM, SWITCHING		8	3-703-816-52 3-707-816-51	(BLACK)...SCREW (M1.4X3.5), SPECIAL HEAD (WHITE)...SCREW (M1.4X3.5), SPECIAL HEAD	
4	X-4924-716-1 X-4924-717-1	(BLACK)...LID ASSY, UPPER (WHITE)...LID ASSY, UPPER		9	4-912-641-11	FOOT, RUBBER	
5	3-331-047-07 3-331-047-08	(WHITE)...SCREW (M1.4X5.5), SPECIAL HEAD (BLACK)...SCREW (M1.4X5.5), SPECIAL HEAD		10	3-329-697-11 3-329-697-21	(BLACK)...SCREW, STEP, PRECISION (WHITE)...SCREW, STEP, PRECISION	
				12	4-885-838-00	(AEP,French)...LABEL CLASS 1	
				13	4-924-779-01 4-924-779-11	(BLACK)..... LABEL, MODEL NUMBER (WHITE)..... LABEL, MODEL NUMBER	

(2)



No.	Part No.	Description	Remarks	No.	Part No.	Description	Remarks
51	4-924-724-01 4-924-724-11	(BLACK)...KNOB (HOLD) (WHITE)...KNOB (HOLD)		68	X-4924-703-1 X-4924-708-1	(BLACK)...CABINET ASSY (WHITE)...CABINET ASSY	
52	*4-924-730-01	HOLDER, LCD		69	3-707-816-51 3-703-816-52	(WHITE)...SCREW (M1.4X3.5), SPECIAL HEAD (BLACK)...SCREW (M1.4X3.5), SPECIAL HEAD	
53	4-924-781-01	HOLDER (LED)		70	*4-924-721-01	BRACKET, LOCK CLAW	
54	3-893-942-01 3-893-942-31	(BLACK)...SCREW (1.7X4), TAPPING (B) (WHITE)...SCREW (1.7X4), TAPPING (B)		71	3-565-923-00	SPRING, COMPRESSION	
55	9-911-838-XX	CUSHION		72	4-924-733-01 4-924-733-11	(BLACK)...KNOB (LOCK CLAW) (WHITE)...KNOB (LOCK CLAW)	
56	4-924-731-01	SPRING		73	*X-4924-702-1 *X-4924-706-1	(BLACK)...COVER ASSY, MD (WHITE)...COVER ASSY, MD	
57	4-924-763-01	SPRING (S402)		75	4-924-705-01	INSULATOR (8)(MD)	
58	4-924-701-01	ROLLER, BS (S402)		76	4-924-710-01	SPRING, COMPRESSION	
59	4-924-706-01	INSULATOR (B)(CABINET)		77	*X-4924-701-1	SPRING ASSY, CLICK	
60	4-924-702-01	SPRING (BSB)(S402)		78	4-924-761-01	PAPER (A), SHIELD	
61	4-924-712-01	SPRING, TORSION		80	4-924-718-01	SCREW, INSULATOR	
62	4-924-709-02	PLATE, LIGHT GUIDE		81	3-335-797-21	SCREW (M1.4X3), TOOTHED LOCK	
63	4-908-792-61 4-908-792-71	(WHITE)...SCREW (B2X6), TAPPING, P1 (BLACK)...SCREW (B2X6), TAPPING, P1		82	4-924-732-01	KNOB (VOLUME)	
64	4-924-703-01	SCREW (B1,7), TAPPING		83	4-924-784-01	SHEET, PROTECTION	
65	4-924-711-01	CLAW, LID LOCK		84	3-703-502-31	SCREW	
66	3-553-530-00	SPRING, COMPRESSION		901	A-3015-613-A	PC BOARD ASSY, MAIN	
67	4-924-760-11	(WHITE)...BUTTON (OPEN)		902	1-626-480-11	PC BOARD, LED	
				903	*1-625-771-11	PC BOARD, CONTROL	
				LCD1	1-808-354-11	LCD MODULE	

(3) MECHANISM SECTION
(KSM-162AAN)



No.	Part No.	Description	Remarks
201	2-641-534-01	SHAFT	
202	7-627-852-18	SCREW, PRECISION +P 1.7X4 TYPE3	
203	X-2641-523-1	RACK ASSY	
204	7-627-552-88	SCREW, PRECISION +P 1.7X2.2	
205	2-641-539-01	RING, CENTER	
206	2-641-524-01	SPRING (A), COMPRESSION	

No.	Part No.	Description	Remarks
207	7-685-103-19	SCREW +P 2X5 TYPE2 NON-SLIT	
904	▲ 8-848-081-21	PICKUP, OPTICAL KSS-162A	
M901	X-2641-525-1	MOTOR ASSY	
M902	X-2641-521-1	MOTOR ASSY, T.T.	
S901	1-570-112-11	SWITCH, LEAF (LIMIT SWITCH)	

Note:

The components identified by mark ▲ or dotted line with mark ▲ are critical for safety. Replace only with part number specified.

Note:

Les composants identifiés par une marque ▲ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

SECTION 6 ELECTRICAL PARTS LIST

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- If there are two or more same circuits in a set such as a stereophonic machine, only typical circuit parts may be indicated and capacitors and resistors in other same circuits may be omitted.

CAPACITORS:MF: μ F, PF: μ F.**RESISTORS**

- All resistors are in ohms.
- F: nonflammable

COILS

- MMH: mH, UH: μ H

SEMICONDUCTORSIn each case, U: μ , for example:UA...: μ A..., UPA...: μ PA...,UPC...: μ PC, UPD...: μ PD...

The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque Δ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Ref.No.	Part No.	Description				Ref.No.	Part No.	Description			
901	A-3015-613-A	PC BOARD ASSY, MAIN				C425	1-163-021-00	CERAMIC CHIP 0.01MF	10%	50V	
902	1-626-480-11	PC BOARD, LED				C426	1-162-638-11	CERAMIC CHIP 1MF		16V	
903	*1-625-771-11	PC BOARD, CONTROL				C427	1-163-080-00	CERAMIC CHIP 0.047MF		50V	
904	Δ 8-848-081-21	PICKUP, OPTICAL KSS-162A				C429	1-162-638-11	CERAMIC CHIP 1MF		16V	
C101	1-163-086-00	CERAMIC CHIP 3PF	0.25PF	50V		C501	1-163-038-00	CERAMIC CHIP 0.1MF		25V	
C102	1-124-462-00	ELECT 10MF	20%	16V		C502	1-163-021-00	CERAMIC CHIP 0.01MF	10%	50V	
C103	1-163-212-00	CERAMIC CHIP 0.002MF	5%	50V		C503	1-124-220-00	ELECT 33MF	20%	4V	
C104	1-163-205-00	CERAMIC CHIP 0.001MF	5%	50V		C505	1-163-078-11	CERAMIC CHIP 0.033MF	10%	25V	
C105	1-163-111-00	CERAMIC CHIP 56PF	5%	50V		C506	1-163-021-00	CERAMIC CHIP 0.01MF	10%	50V	
C106	1-163-013-00	CERAMIC CHIP 0.0022MF	10%	50V		C507	1-135-070-00	TANTAL. CHIP 0.1MF	20%	25V	
C107	1-135-099-00	TANTAL. CHIP 2.2MF	20%	6.3V		C508	1-163-038-00	CERAMIC CHIP 0.1MF		25V	
C108	1-135-099-00	TANTAL. CHIP 2.2MF	20%	6.3V		C509	1-124-220-00	ELECT 33MF	20%	4V	
C109	1-124-584-00	ELECT 100MF	20%	10V		C510	1-163-038-00	CERAMIC CHIP 0.1MF		25V	
C110	1-163-117-00	CERAMIC CHIP 100PF	5%	50V		C511	1-163-021-00	CERAMIC CHIP 0.01MF	10%	50V	
C111	1-163-117-00	CERAMIC CHIP 100PF	5%	50V		C512	1-124-584-00	ELECT 100MF	20%	10V	
C201	1-163-086-00	CERAMIC CHIP 3PF	0.25PF	50V		C513	1-124-220-00	ELECT 33MF	20%	4V	
C202	1-124-462-00	ELECT 10MF	20%	16V		C514	1-163-095-00	CERAMIC CHIP 12PF	5%	50V	
C203	1-163-212-00	CERAMIC CHIP 0.002MF	5%	50V		C515	1-163-117-00	CERAMIC CHIP 100PF	5%	50V	
C204	1-163-205-00	CERAMIC CHIP 0.001MF	5%	50V		C516	1-163-038-00	CERAMIC CHIP 0.1MF		25V	
C205	1-163-111-00	CERAMIC CHIP 56PF	5%	50V		C517	1-163-038-00	CERAMIC CHIP 0.1MF		25V	
C206	1-163-013-00	CERAMIC CHIP 0.0022MF	10%	50V		C518	1-163-021-00	CERAMIC CHIP 0.01MF	10%	50V	
C207	1-135-099-00	TANTAL. CHIP 2.2MF	20%	6.3V		C519	1-163-038-00	CERAMIC CHIP 0.1MF		25V	
C208	1-135-099-00	TANTAL. CHIP 2.2MF	20%	6.3V		C520	1-163-037-11	CERAMIC CHIP 0.022MF	10%	25V	
C209	1-124-584-00	ELECT 100MF	20%	10V		C521	1-163-117-00	CERAMIC CHIP 100PF	5%	50V	
C210	1-163-117-00	CERAMIC CHIP 100PF	5%	50V		C522	1-124-239-00	ELECT 6.8MF	20%	25V	
C211	1-163-117-00	CERAMIC CHIP 100PF	5%	50V		C523	1-124-239-00	ELECT 6.8MF	20%	25V	
C301	1-124-584-00	ELECT 100MF	20%	10V		C524	1-124-222-00	ELECT 22MF	20%	6.3V	
C302	1-124-584-00	ELECT 100MF	20%	10V		C525	1-163-038-00	CERAMIC CHIP 0.1MF		25V	
C305	1-124-462-00	ELECT 10MF	20%	16V		C527	1-163-081-00	CERAMIC CHIP 0.22MF		25V	
C306	1-124-584-00	ELECT 100MF	20%	10V		C528	1-124-222-00	ELECT 22MF	20%	6.3V	
C307	1-124-584-00	ELECT 100MF	20%	10V		C529	1-163-125-00	CERAMIC CHIP 220PF	5%	50V	
C323	1-163-021-00	CERAMIC CHIP 0.01MF	10%	50V		C531	1-163-038-00	CERAMIC CHIP 0.1MF		25V	
C324	1-163-021-00	CERAMIC CHIP 0.01MF	10%	50V		C532	1-163-023-00	CERAMIC CHIP 0.015MF	10%	50V	
C401	1-163-021-00	CERAMIC CHIP 0.01MF	10%	50V		C533	1-162-638-00	CERAMIC CHIP 1MF	10%	16V	
C402	1-163-021-00	CERAMIC CHIP 0.01MF	10%	50V		C535	1-163-141-00	CERAMIC CHIP 0.001MF	10%	50V	
C403	1-126-357-11	ELECT 150MF	20%	16V		C536	1-163-078-11	CERAMIC CHIP 0.033MF	10%	25V	
C404	1-163-111-00	CERAMIC CHIP 56PF	5%	50V		C537	1-135-083-00	TANTAL. CHIP 0.47MF	20%	25V	
C405	1-163-125-00	CERAMIC CHIP 220PF	5%	50V		C538	1-124-434-00	ELECT 220MF	20%	10V	
C406	1-124-584-00	ELECT 100MF	20%	10V		C539	1-163-141-00	CERAMIC CHIP 0.001MF	5%	50V	
C407	1-124-257-00	ELECT 2.2MF	20%	50V		C540	1-162-637-11	CERAMIC CHIP 0.47MF		16V	
C411	1-124-462-00	ELECT 10MF	20%	16V		C543	1-124-255-61	ELECT 1MF	20%	50V	
C412	1-124-245-00	ELECT 4.7MF	20%	16V		C544	1-124-462-00	ELECT 10MF	20%	16V	
C414	1-124-462-00	ELECT 10MF	20%	16V		C545	1-163-075-00	CERAMIC CHIP 0.047MF	10%	25V	
C422	1-163-137-00	CERAMIC CHIP 680PF	5%	50V		C546	1-163-986-00	CERAMIC CHIP 0.027MF	10%	25V	
C423	1-162-638-11	CERAMIC CHIP 1MF		16V		C547	1-162-638-11	CERAMIC CHIP 1MF		16V	
C424	1-163-135-00	CERAMIC CHIP 560PF	5%	50V		C548	1-124-258-00	ELECT 3.3MF	20%	50V	

Ref.No.	Part No.	Description			
C549	1-124-462-00	ELECT	10MF	20%	16V
C550	1-163-141-00	CERAMIC CHIP	0.001MF	5%	50V
C551	1-124-462-00	ELECT	10MF	20%	16V
C552	1-124-255-00	ELECT	1MF	20%	16V
C553	1-162-638-11	CERAMIC CHIP	1MF		16V
C554	1-162-637-11	CERAMIC CHIP	0.47MF		16V
C555	1-163-081-00	CERAMIC CHIP	0.22MF		25V
C556	1-163-143-00	CERAMIC CHIP	0.0012MF	10%	50V
C557	1-163-017-00	CERAMIC CHIP	0.0047MF	10%	50V
C558	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C559	1-124-584-00	ELECT	100MF	20%	10V
C561	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C562	1-162-638-11	CERAMIC CHIP	1MF		16V
C601	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C602	1-163-101-00	CERAMIC CHIP	22PF	5%	50V
C603	1-163-101-00	CERAMIC CHIP	22PF	5%	50V
C604	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C605	1-162-638-11	CERAMIC CHIP	1MF		16V
C606	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C607	1-161-494-00	CERAMIC CHIP	0.022		25V
C801	1-163-141-00	CERAMIC CHIP	0.001MF	5%	50V
C802	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C803	1-124-257-00	ELECT	2.2MF	20%	50V
C804	1-124-257-00	ELECT	2.2MF	20%	50V
C805	1-163-113-00	CERAMIC CHIP	68PF	5%	50V
C806	1-163-113-00	CERAMIC CHIP	68PF	5%	50V
C807	1-163-021-00	CERAMIC CHIP	0.01MF	10%	50V
C808	1-162-638-11	CERAMIC CHIP	1MF		16V
C809	1-162-638-11	CERAMIC CHIP	1MF		16V
C810	1-162-638-11	CERAMIC CHIP	1MF		16V
C811	1-163-038-00	CERAMIC CHIP	0.1MF		25V
CN501	1-566-976-11	SOCKET, CONNECTOR 12P			
CN502	1-565-309-11	CONNECTOR, FLEXIBLE 4P			
CN801	1-563-589-11	CONNECTOR, FLEXIBLE 12P			
CN802	1-563-615-11	CONNECTOR, FLEXIBLE 12P			
CNJ401	1-562-961-11	JACK (DC IN 9V)			
D401	8-719-200-36	DIODE E10QS04			
D402	8-719-106-22	DIODE RD7.5M-B1			
D403	8-719-200-36	DIODE E10QS04			
D405	8-719-200-36	DIODE E10QS04			
D406	8-719-101-23	DIODE 1SS123			
D407	8-719-100-05	DIODE 1S2837			
D409	8-719-938-75	DIODE SB05-05CP			
D410	8-719-200-36	DIODE E10QS04			
D411	8-719-927-82	DIODE SLP478C			
D415	8-719-927-82	DIODE SLP478C			
D416	8-719-927-82	DIODE SLP478C			
D417	8-719-927-82	DIODE SLP478C			
D501	8-719-938-74	DIODE SB01-05CP			
D502	8-719-938-74	DIODE SB01-05CP			
D503	8-719-938-74	DIODE SB01-05CP			
D601	8-719-100-05	DIODE 1S2837			
D801	8-719-951-22	DIODE 1MN10			
D802	8-719-951-22	DIODE 1MN10			
D804	8-719-100-05	DIODE 1S2837			
D805	8-719-106-71	DIODE RD12M-B2			
D806	8-719-100-05	DIODE 1S2837			

Ref.No.	Part No.	Description			
IC301	8-759-805-34	IC CXD1161M-3			
IC302	8-759-630-75	IC M51568FP			
IC303	8-759-745-64	IC NJM4560M			
IC401	8-759-939-07	IC BA9700F			
IC501	8-752-033-55	IC CXA1271Q			
IC502	8-752-033-54	IC CXA1272Q-Z			
IC503	8-759-970-89	IC BA10358F			
IC504	8-759-030-17	IC MPC1715			
IC505	8-759-230-43	IC TC7504F			
IC601	8-759-947-03	IC CXD1130Q			
IC602	8-752-320-44	IC CXK5816M-10L			
IC801	8-752-804-07	IC CXP5086-026Q			
IC802	8-759-700-07	IC NJM2903M			
J301	1-565-310-11	JACK (LINE OUT)			
J302	1-565-311-11	JACK (PHONES)			
J801	1-562-870-31	JACK (REMOTE)			
JR101	1-216-296-00	METAL GLAZE	0	5%	1/8W
JR102	1-216-296-00	METAL GLAZE	0	5%	1/8W
JR201	1-216-296-00	METAL GLAZE	0	5%	1/8W
JR202	1-216-296-00	METAL GLAZE	0	5%	1/8W
JR301	1-216-296-00	METAL GLAZE	0	5%	1/8W
JR302	1-216-296-00	METAL GLAZE	0	5%	1/8W
JR303	1-216-295-00	METAL GLAZE	0	5%	1/10W
JR307	1-216-295-00	METAL GLAZE	0	5%	1/10W
L401	1-459-842-11	COIL (WITH CORE)			
L402	1-412-038-21	INDUCTOR CHIP 100UH			
L403	1-412-037-21	INDUCTOR CHIP 470UH			
L501	1-412-036-21	INDUCTOR CHIP 10UH			
L502	1-412-038-21	INDUCTOR CHIP 100UH			
L503	1-412-038-21	INDUCTOR CHIP 100UH			
L504	1-412-038-21	INDUCTOR CHIP 100UH			
L505	1-412-039-21	INDUCTOR CHIP 100UH			
L506	1-412-036-21	INDUCTOR CHIP 10UH			
LCD1	1-808-354-11	LCD MODULE			
M901	X-2641-525-1	MOTOR ASSY			
M902	X-2641-521-1	MOTOR ASSY, T.T.			
Q302	8-729-159-64	TRANSISTOR 2SD596			
Q303	8-729-159-64	TRANSISTOR 2SD596			
Q401	8-729-901-46	TRANSISTOR DTA114YK			
Q402	8-729-902-99	TRANSISTOR DTC114TK			
Q403	8-729-102-89	TRANSISTOR 2SB624-BV5			
Q404	8-729-881-23	TRANSISTOR 2SC2812L7			
Q405	8-729-159-64	TRANSISTOR 2SD596			
Q406	8-729-161-01	TRANSISTOR 2SC2412K			
Q407	8-729-806-75	TRANSISTOR 2SB1120			
Q408	8-729-901-00	TRANSISTOR DTC124EK			
Q409	8-729-216-21	TRANSISTOR 2SA1162Y			
Q410	8-729-800-68	TRANSISTOR 2SB815			
Q412	8-729-800-36	TRANSISTOR 2SD1048			
Q413	8-729-806-75	TRANSISTOR 2SB1120			
Q414	8-729-903-10	TRANSISTOR FMW1			
Q418	8-729-901-00	TRANSISTOR DTC124EK			
Q423	8-729-907-28	TRANSISTOR IMD3			
Q424	8-729-903-10	TRANSISTOR FMW1			
Q501	8-729-216-21	TRANSISTOR 2SA1162Y			
Q502	8-729-159-64	TRANSISTOR 2SD596			
Q503	8-729-902-99	TRANSISTOR DTC114TK			
Q504	8-729-271-23	TRANSISTOR 2SC2712			

Ref.No.	Part No.	Description
Q506	8-729-903-29	TRANSISTOR DTA144TK
Q801	8-729-901-05	TRANSISTOR DTA124EK
Q802	8-729-159-64	TRANSISTOR 25D596
Q803	8-729-907-28	TRANSISTOR 1MD3
R101	1-216-329-11	METAL GLAZE 5.1K 1% 1/10W
R102	1-216-336-11	METAL GLAZE 47K 1% 1/10W
R103	1-216-334-11	METAL GLAZE 22K 1% 1/10W
R104	1-218-160-00	METAL GLAZE 43K 1% 1/10W
R105	1-216-328-11	METAL GLAZE 4.3K 1% 1/10W
R106	1-216-333-11	METAL GLAZE 15K 1% 1/10W
R107	1-216-063-00	METAL GLAZE 3.9K 5% 1/10W
R108	1-216-053-00	METAL GLAZE 1.5K 5% 1/10W
R109	1-216-077-00	METAL GLAZE 15K 5% 1/10W
R110	1-216-009-00	METAL GLAZE 22 5% 1/10W
R111	1-216-073-00	METAL GLAZE 10K 5% 1/10W
R112	1-216-033-00	METAL GLAZE 220 5% 1/10W
R114	1-216-053-00	METAL GLAZE 1.5K 5% 1/10W
R115	1-216-073-00	METAL GLAZE 10K 5% 1/10W
R116	1-216-097-00	METAL GLAZE 100K 1% 1/10W
R201	1-216-329-11	METAL GLAZE 5.1K 1% 1/10W
R202	1-216-336-11	METAL GLAZE 47K 1% 1/10W
R203	1-216-334-11	METAL GLAZE 22K 1% 1/10W
R204	1-218-160-00	METAL GLAZE 43K 1% 1/10W
R205	1-216-328-11	METAL GLAZE 4.3K 1% 1/10W
R206	1-216-333-11	METAL GLAZE 15K 1% 1/10W
R207	1-216-063-00	METAL GLAZE 3.9K 5% 1/10W
R208	1-216-053-00	METAL GLAZE 1.5K 5% 1/10W
R209	1-216-077-00	METAL GLAZE 15K 5% 1/10W
R210	1-216-009-00	METAL GLAZE 22 5% 1/10W
R211	1-216-073-00	METAL GLAZE 10K 5% 1/10W
R212	1-216-182-00	METAL GLAZE 220 5% 1/8W
R214	1-216-053-00	METAL GLAZE 1.5K 5% 1/10W
R215	1-216-073-00	METAL GLAZE 10K 5% 1/10W
R216	1-216-097-00	METAL GLAZE 100K 1% 1/10W
R301	1-216-298-00	METAL GLAZE 2.2 5% 1/10W
R302	1-216-298-00	METAL GLAZE 2.2 5% 1/10W
R303	1-216-121-00	METAL GLAZE 1M 5% 1/10W
R327	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W
R328	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W
R401	1-216-077-00	METAL GLAZE 15K 5% 1/10W
R402	1-216-089-00	METAL GLAZE 47K 5% 1/10W
R403	1-216-089-00	METAL GLAZE 47K 5% 1/10W
R404	1-216-033-00	METAL GLAZE 220 5% 1/10W
R405	1-216-067-00	METAL GLAZE 5.6K 5% 1/10W
R406	1-216-081-00	METAL GLAZE 22K 5% 1/10W
R407	1-216-089-00	METAL GLAZE 47K 5% 1/10W
R408	1-216-049-00	METAL GLAZE 1K 5% 1/10W
R409	1-216-077-00	METAL GLAZE 15K 5% 1/10W
R410	1-216-083-00	METAL GLAZE 27K 5% 1/10W
R411	1-216-089-00	METAL GLAZE 47K 5% 1/10W
R412	1-216-093-00	METAL GLAZE 68K 5% 1/10W
R413	1-216-077-00	METAL GLAZE 15K 5% 1/10W
R414	1-216-055-00	METAL GLAZE 1.8K 5% 1/10W
R416	1-216-335-11	METAL GLAZE 24K 1% 1/10W
R417	1-216-061-00	METAL GLAZE 3.3K 5% 1/10W
R418	1-216-061-00	METAL GLAZE 3.3K 5% 1/10W
R419	1-216-045-00	METAL GLAZE 680 5% 1/10W
R420	1-216-041-00	METAL GLAZE 470 5% 1/10W
R421	1-216-092-00	METAL GLAZE 62K 5% 1/10W

Ref.No.	Part No.	Description
R422	1-216-067-00	METAL GLAZE 5.6K 5% 1/10W
R423	1-216-045-00	METAL GLAZE 680 5% 1/10W
R424	1-216-081-00	METAL GLAZE 22K 5% 1/10W
R425	1-216-049-00	METAL GLAZE 1K 5% 1/10W
R426	1-216-033-00	METAL GLAZE 220 5% 1/10W
R427	1-216-056-00	METAL GLAZE 2K 5% 1/10W
R428	1-216-062-00	METAL GLAZE 3.6K 5% 1/10W
R429	1-216-095-00	METAL GLAZE 82K 5% 1/10W
R430	1-216-061-00	METAL GLAZE 3.3K 5% 1/10W
R431	1-216-073-00	METAL GLAZE 10K 5% 1/10W
R432	1-216-043-00	METAL GLAZE 560 5% 1/10W
R434	1-216-043-00	METAL GLAZE 560 5% 1/10W
R436	1-216-694-11	METAL CHIP 62K 0.50% 1/10W
R437	1-216-686-11	METAL CHIP 30K 0.50% 1/10W
R438	1-216-053-00	METAL GLAZE 1.5K 5% 1/10W
R439	1-216-695-11	METAL CHIP 68K 0.50% 1/10W
R446	1-216-009-00	METAL GLAZE 22 5% 1/10W
R448	1-216-041-00	METAL GLAZE 470 5% 1/10W
R449	1-216-748-11	METAL GLAZE 39K 1% 1/10W
R450	1-216-115-00	METAL GLAZE 560K 5% 1/10W
R451	1-216-115-00	METAL GLAZE 560K 5% 1/10W
R452	1-216-049-00	METAL GLAZE 1K 5% 1/10W
R501	1-216-024-00	METAL GLAZE 91 5% 1/10W
R502	1-216-069-00	METAL GLAZE 6.8K 5% 1/10W
R503	1-216-049-00	METAL GLAZE 1K 5% 1/10W
R504	1-216-073-00	METAL GLAZE 10K 5% 1/10W
R506	1-216-081-00	METAL GLAZE 22K 5% 1/10W
R508	1-216-069-00	METAL GLAZE 6.8K 5% 1/10W
R509	1-216-077-00	METAL GLAZE 15K 5% 1/10W
R510	1-216-073-00	METAL GLAZE 10K 5% 1/10W
R511	1-216-150-00	METAL GLAZE 10 5% 1/8W
R512	1-216-085-00	METAL GLAZE 33K 5% 1/10W
R513	1-216-073-00	METAL GLAZE 10K 5% 1/10W
R514	1-216-073-00	METAL GLAZE 10K 5% 1/10W
R515	1-216-097-00	METAL GLAZE 100K 5% 1/10W
R516	1-216-121-00	METAL GLAZE 1M 5% 1/10W
R517	1-216-093-00	METAL GLAZE 68K 5% 1/10W
R518	1-216-097-00	METAL GLAZE 100K 5% 1/10W
R519	1-216-119-00	METAL GLAZE 820K 5% 1/10W
R520	1-216-095-00	METAL GLAZE 82K 5% 1/10W
R521	1-216-095-00	METAL GLAZE 82K 5% 1/10W
R522	1-216-081-00	METAL GLAZE 22K 5% 1/10W
R523	1-216-059-00	METAL GLAZE 2.7K 5% 1/10W
R524	1-216-090-00	METAL GLAZE 51K 5% 1/10W
R525	1-216-097-00	METAL GLAZE 100K 5% 1/10W
R526	1-216-114-00	METAL GLAZE 510K 5% 1/10W
R528	1-216-077-00	METAL GLAZE 15K 5% 1/10W
R529	1-216-686-11	METAL CHIP 30K 0.50% 1/10W
R530	1-216-686-11	METAL CHIP 30K 0.50% 1/10W
R531	1-216-059-00	METAL GLAZE 2.7K 5% 1/10W
R532	1-216-103-00	METAL GLAZE 180K 5% 1/10W
R533	1-216-063-00	METAL GLAZE 3.9K 5% 1/10W
R534	1-216-121-00	METAL GLAZE 1M 5% 1/10W
R536	1-216-099-91	METAL GLAZE 120K 5% 1/10W
R537	1-216-083-00	METAL GLAZE 27K 5% 1/10W
R538	1-216-094-00	METAL GLAZE 75K 5% 1/10W
R539	1-216-094-00	METAL GLAZE 75K 5% 1/10W
R540	1-216-086-00	METAL GLAZE 36K 5% 1/10W

Ref.No.	Part No.	Description
R544	1-216-077-00	METAL GLAZE 15K 5% 1/10W
R545	1-216-113-00	METAL GLAZE 470K 5% 1/10W
R546	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W
R547	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W
R548	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W
R549	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W
R550	1-216-049-00	METAL GLAZE 1K 5% 1/10W
R551	1-216-049-00	METAL GLAZE 1K 5% 1/10W
R552	1-216-081-00	METAL GLAZE 22K 5% 1/10W
R553	1-216-049-00	METAL GLAZE 1K 5% 1/10W
R554	1-216-033-00	METAL GLAZE 220 5% 1/10W
R555	1-216-081-00	METAL GLAZE 22K 5% 1/10W
R556	1-216-073-00	METAL GLAZE 10K 5% 1/10W
R557	1-216-049-00	METAL GLAZE 1K 5% 1/10W
R558	1-216-073-00	METAL GLAZE 10K 5% 1/10W
R559	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W
R560	1-216-129-00	METAL GLAZE 2.2K 5% 1/10W
R561	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W
R601	1-216-097-00	METAL GLAZE 100K 5% 1/10W
R602	1-216-089-00	METAL GLAZE 47K 5% 1/10W
R801	1-216-089-00	METAL GLAZE 47K 5% 1/10W
R802	1-216-238-00	METAL GLAZE 47K 5% 1/8W
R803	1-216-109-00	METAL GLAZE 330K 5% 1/10W
R804	1-216-041-00	METAL GLAZE 470 5% 1/10W
R806	1-216-089-00	METAL GLAZE 47K 5% 1/10W
R807	1-216-073-00	METAL GLAZE 10K 5% 1/10W
R808	1-216-045-00	METAL GLAZE 680 5% 1/10W
R809	1-216-059-00	METAL GLAZE 2.7K 5% 1/10W
R810	1-216-071-00	METAL GLAZE 8.2K 5% 1/10W
R811	1-216-077-00	METAL GLAZE 15K 5% 1/10W
R812	1-216-077-00	METAL GLAZE 15K 5% 1/10W
R813	1-216-077-00	METAL GLAZE 15K 5% 1/10W
RV301	1-237-092-11	RES, VAR, CARBON 10K/10K (VOLUME)
RV401	1-228-993-00	RES, ADJ, CARBON 5K
RV501	1-228-996-00	RES, ADJ, CARBON 50K
RV502	1-228-996-00	RES, ADJ, CARBON 50K
RV503	1-228-995-00	RES, ADJ, CARBON 20K
RV504	1-230-526-11	RES, ADJ, CARBON 47K
RV505	1-228-990-00	RES, ADJ, CARBON 1K
S401	1-571-177-11	SWITCH, SLIDE (HOLD)
S801	1-554-911-11	SWITCH, LEAF (OPEN SWITCH)
S803	1-554-371-51	SWITCH, TACT (PLAY/PAUSE)
S804	1-554-371-51	SWITCH, TACT (STOP)
S805	1-554-371-51	SWITCH, TACT (FF)
S806	1-554-371-51	SWITCH, TACT (REW)
S807	1-571-484-11	SWITCH, KEY BOARD (MODE,ENTER/REMAIN)
S901	1-570-112-11	SWITCH, LEAF (LIMIT SWITCH)
X601	1-567-737-11	VIBRATOR, CRYSTAL, 16.9344MHZ
X801	1-567-094-00	VIBRATOR, CERAMIC, 3.56MHZ

ACCESSORY & PACKING MATERIAL

1-463-691-11	(Canadian).....ADAPTOR, AC (AC-930A)
1-463-700-12	(UK).....ADAPTOR, AC (AC930A)
1-463-701-12	(Australian)...ADAPTOR, AC (AC930A)
1-463-702-11	(E).....ADAPTOR, AC (AC950W)
1-463-705-11	(AEP,French)...ADAPTOR, AC (AC930AEP)
1-463-968-11	(US).....ADAPTOR, AC (AC-940)
1-526-565-00	(E).....AC PLUG ADAPTOR
1-528-220-11	BATTERY, STORAGE, LEAD (BP-3)
1-555-658-21	CORD, CONNECTION
2-298-630-01	(UK)...SPRING (RIGHT)
3-769-848-11	(AEP,UK,Australian,French) ...MANUAL, INSTRUCTION
3-769-848-21	(US,Canadian)...MANUAL, INSTRUCTION
3-769-848-31	(Canadian).....MANUAL, INSTRUCTION
3-769-848-41	(AEP,French).....MANUAL, INSTRUCTION
4-917-797-01	(UK)...CARTON HEADPHONE
4-918-803-01	(UK)...SPRING
4-918-814-01	(UK)...TERMINAL BOARD (B)
*4-920-407-01	BAG, PROTECTION
4-924-121-01	CASE, ACCESSORY
4-924-126-01	(EXCEPT FOR French)...BELT, CARRYING
4-924-174-01	(French)...BELT, HAND
4-924-739-01	CUSHION (LEFT, RIGHT)
4-924-743-01	(US).....INDIVIDUAL CARTON
4-924-745-01	(Canadian).....INDIVIDUAL CARTON
4-924-747-01	(UK).....INDIVIDUAL CARTON
4-924-748-01	(AEP,E,Australian,French) ...INDIVIDUAL CARTON
4-924-779-01	(AEP,UK,E,Australian,French:BLACK) ...LABEL, MODEL NUMBER
4-924-779-11	(AEP,UK,E,French:WHITE) ...LABEL, MODEL NUMBER
8-952-266-89	(UK)...HEADPHONE MDR-A10L/B SET
X-4918-806-1	(UK:BLACK)...CASE ASSY, BATTERY
X-4918-807-1	(UK:WHITE)...CASE ASSY, BATTERY